PUBLICATIONS WITH ABSTRACTS OF THE ENZYME RESEARCH DIVISION

Bureau of Agricultural and Industrial Chemistry
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A limited number of reprints of publications are available
Those not available are marked with an asterick (*).

SUPPLEMENT I

January 1, 1948 - July 31, 1948

*B. Axelrod. A new mode of enzymatic phosphate transfer. Jour. Biol. Chem. 172:1-13. January, 1948.
An enzyme, which may be identical with acid phosphatase, present in citrus fruit, apple, human urine, and taka-diastase but not in onion, sweet potato, pear or dog kidney alkaline phosphatase preparation, was found to transfer phosphate from aryl phosphate to alkanols, without intervention of nucleotides. The acceptor specificity, pH optimum, and effect of acceptor and donor concentration on this so-called "phosphotransferase" reaction were investigated.

A. K. Balls. What a foreman ought to know about enzymes. Food Ind. 20:169. February, 1948.
Action of enzymes in food products is discussed. Enzymes are produced by molds and bacteria; hence it is necessary that the food processor know principles of sanitation. Many of the methods used for inactivation of enzymes can also be used for destruction of molds and bacteria.

O. H. Emerson. The bitter principles of citrus fruit. I. Isolation of nomilin, a new bitter principle from the seeds of oranges and lemons. Jour. Amer. Chem. Soc. 70:545-549. February, 1948.
Limonin was the sole bitter principle isolated from Navel oranges. This substance was also obtained from Valencia orange seeds and lemon seeds. A new bitter principle, nomilin, $C_{28}H_{34}O_9$, was isolated from orange seeds and lemon seeds. Like limonin, nomilin is a dilactone, but on treatment with dilute alkali followed by acidification, acetic acid is lost and there is obtained a lactone acid, nomilic acid, $C_{26}H_{32}O_8$. Limonin and nomilin both react with hydroxylamine in the presence of pyridine, limonin oxime being a beautifully crystalline substance.

A. K. Balls, M. K. Walden and R. R. Thompson. A crystalline beta-amylase from sweet potatoes. Jour. Biol. Chem. 173:9-19. March, 1948.
An amylase of the beta-type in sweet potatoes has been purified and isolated as a crystalline protein. Methods are described in detail.